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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/591,017      | 06/09/2000  | Michael K. Templeton | D558                | 3492             |

7590 01/15/2003  
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EXAMINER

PHAM, HOA Q

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2877

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Appli cation No.

09/591,017

Applicant(s)

TEMPLETON ET AL. 

Examin er

Hoa Q. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8, 10-19, 21-26, 28, 29, 31-34 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-19, 21-26, 28, 29, 31-34 and 36-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claims 10 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 10 and 22 recite the limitation "the at least one laser includes a first detector... and a second detector..." is vague and indefinite. A laser can't include a first detector and second detector. Laser is an emitter and detector is a receiver. They are not the same.

b. Claim 10 is not clear, what is the different between "a first detector", "a second detector" in lines 5-7 and the "at least one detector" in line 8.

c. Claim 22 is not clear, what is the different between "a first detector", "a second detector" in lines 6-8 and the "at least one detector" in line 9.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 29, 31-34, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blesener et al (5,121,988) in view of Harwell et al (5,942,672) and Liu (5,534,309).

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Regarding claims 1, 31, and 36, Blesener et al (of record) discloses a system for monitoring the particle count in a chamber (23), comprising: a system for sending light from the light source (110) across the chamber, a system (60) for receiving the light, and a system (102, 103, 108) for determining particle count based upon interruptions in the light being received by the receiving system (figures 2, 3a, and 3b). Blesener et al does not explicitly teach an alarm system, which sends an alarm if the contaminated particle count exceeds a predetermined threshold. However, such a feature is known in the art as taught by Harwell et al. Harwell et al, from the same field of endeavor, mentions that "the total number of particles counted during a sample window is compared to a set point representing a threshold particle count value; and if the count exceeds the threshold value, an alarm is provided by the particle sensor control" (column 2 lines 20-27). Those of ordinary skill in the art at the time the invention was made to include in Blesener et al an alarm system as taught by Harwell et al. The rationale for this modification would have been arisen from the fact that using such alarm system would alert the operator when the chamber need to be cleaned and maintained as suggested by Harwell et al in column 2 lines 24-27.

Regarding claims 29 and 34, Blesener et al does not explicitly teach means for exhausting the contaminated particles from the chamber; however, such a feature is known in the art as taught by Liu (5,534,309) (of record). Liu discloses a method and apparatus for depositing particles on the surface in which the exhaust system (36) is used for exhausting unwanted particles in a chamber (column 4, lines 23-28). Those of ordinary skill in the art at the time the invention was made to include in Blesener et al an

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exhaust system for exhausting unwanted particles from a chamber as taught by Liu because this is a known system which is known to serve for the purpose of Blesener et al of determining the presence of the particles in the chamber.

Regarding claim 5, see column 10, lines 58-69 of Blesener et al for scattering system.

Regarding claims 29, 34, see figure 2 of Blesener et al for digital data (108) from the measuring system (100).

Regarding claims 32-33 and 37-38, see figure 3 of Blesener et al for mirrors 21a.

4. Claims 2-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blesener et al, Harwell et al and Liu in view of Zinner (3,591,290).

Regarding claims 2, 3, Blesener et al does not explicitly teach the use of optical fibers for transmitting light or receiving light. However, such a feature is known in the art as taught by Zinner (of record). Zinner, from the same field of endeavor, teaches that fiber optics arrays (16, 18) are used for transmitting and receiving light (figure 2). Those of ordinary skill in the art at the time the invention was made to include in Blesener et al an optics array as taught by Zinner for the purpose of transmitting light and receiving light. The rationale for this modification would have arisen from the fact that using such fibers would increase the signal to noise ratio.

Regarding claims 6-8, laser Doppler anemometry system, an interferometry system and spectrometry system are known in the art. It would have been obvious to

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include such systems in Blesener et al for the same purpose of detecting particles in a chamber because they are function in the same manner.

Regarding claim 4, it would have been obvious to replace the fiber array of Zinner by a beam splitter for the purpose of splitting different light rays into the chamber.

### ***Allowable Subject Matter***

5. Claims 10-19, 21-26, and 28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

### ***Response to Arguments***

6. Applicant's arguments filed 11/21/02 have been fully considered but they are not persuasive.

a. Applicant's remarks, page 8, argues that Blesener et al does not teach or suggest the need to maintain particulate concentrations below a predetermined set point and one of ordinary skill in the art at the time of the claimed invention would not have had any motivation to employ an alarm system. The argument is not deemed to be persuasive because if Blesener et al suggest or teach an alarm system, the rejection of the claims should be under 35 U.S.C 102. The alarm system is suggested by Harwell et al as mentioned above. Blesener et al teaches that the presence of the particles in the fluid environment is determined and Harwell et al disclose a particle counting device in which an alarm system is provided if the total number of particles counted exceeds a

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set point (threshold value). Thus, one of ordinary skill in the art at the time the invention was made to include in Blesener et al an alarm system as taught by Harwell et al for the purpose of maintaining the fluid or cleaning the chamber of Blesener et al.

b. Blesener et al does not state that an alarm system is not needed in the system.

In view of the foregoing, it is believed that the rejection of the claims under 35 U.S.C 103 is proper.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

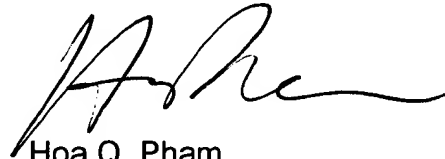
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (703) 308-

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4808. The examiner can normally be reached on 6:30 AM to 5 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Hoa Q. Pham  
Primary Examiner  
Art Unit 2877

HP  
January 14, 2003